

### **REMARKS**

These remarks are in response to the Office Action mailed February 24, 2004. Claims 1-4, 6-12, 14-16, 22-24, 28, 33 and 37 have been amended. The majority of the amendments are to use consistent claim terms and provide antecedent basis. Support for "GAP promoter" can be found at page 13, lines 8-10; page 24, lines 10-16 and in Examples 3-5. Support for the amendment to claim 37 can be found at page 17, lines 18-21. No new matter is believed to have been introduced.

#### **I. CLAIM OBJECTION**

Claims 14, 16, and 22 stand objected to because of a grammatical error. The claims have been amended to recite "wherein the yeast cell wall". Thus, the objection may be withdrawn.

Claim 33 stands objected to because of a grammatical error. The claim has been amended to recite "on the surface layer of a cell wall". Thus, the objection may be withdrawn.

#### **II. REJECTION UNDER 35 U.S.C. §112, SECOND PARAGRAPH**

Claims 1-2, 5-16, 22-24, 28, 32-33, and 37 stand rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully traverse this rejection with respect to the claims as amended.

The claims have been amended to correct dependencies and antecedent basis for various claim terms. For example, claims 2 and 37 have been amended to recite "a yeast Pir (protein internal repeat) cell wall protein coding sequence" to maintain antecedent basis; claim 6 has been amended to depend from claim 5; claim 7 have been amended to depend from claim 2; claim 9 has been amended as suggested by the Examiner; claim 10 has been amended as suggested by the Examiner; claim 12 has been amended as suggested by the Examiner; claim 22 has been amended to clarify the claim terms in claim 13 and 22; claim 14 has been amended claim 14 to replace "useful protein" with "enzyme protein"; claims 14, 16, and 22 have been amended as

suggested by the Examiner to insert "sequence"; claim 24 has been amended as suggested by the Examiner; and claims 12, 28, 32 and 33 have been amended to use consistent terminology to better clarify the invention. Accordingly, Applicants respectfully request withdrawal of the §112, second paragraph rejection.

### **III. REJECTION UNDER 35 U.S.C. §112, FIRST PARAGRAPH**

Claims 1-16, 22-24, 28, 32-33 and 37 stand rejected under 35 U.S.C. §112, first paragraph as allegedly failing to comply with the written description requirement. The claims allegedly contain subject matter which was not describe in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s) at the time the application was filed, had possession of the claimed invention. Applicants respectfully traverse this rejection with respect to the amended claims.

Applicants submit that one of the useful features of the present invention resides in the fact that it is applicable to a wide range of proteins. It should be apparent to the Examiner that the diverse nature of the proteins that can be used in the methods and compositions of the disclosure is, in itself, evidence that the claims should not be limited to a specific protein species. The Examiner is reminded that not only are Applicants entitled to the specific embodiments disclosed, but are also entitled to broader claims that are supported by the specification. Here, the broad nature of the chimeric proteins that can be produced (and are demonstrated), clearly demonstrate enablement and written description for a broad genus.

Accordingly, Applicants respectfully request withdrawal of the rejection.

Claims 1-16, 22-24, 28, 32-33 and 37 stand rejected under 35 U.S.C. §112, first paragraph, because the specification while being enabling for a chimeric nucleic acid comprising a first domain encoding SEQ ID NO:1 and a second domain comprising *S. pombe* Gma12, alpha-1,3-FucT, *S. cerevisiae* KRE2, *S. cervisiae* MNN1, and rat alpha-2,3-sialyltransferase allegedly does not provide enablement for all Pir cell wall proteins, any variant of SEQ ID NO:1, and all peptides or polypeptides. Applicants respectfully traverse this rejection.

A feature of the invention is that the Pir protein is a "yeast Pir cell wall protein" thus it has a specific structure associated with such molecules as known in the art. Furthermore, a feature of the claimed invention is that the chimeric molecule is retained on the yeast cell surface cell wall, thus the claimed invention includes a functional element. Accordingly, the claims do not include "any" Pir cell wall protein, but rather encompass "yeast Pir cell wall proteins" having a specific structure as known in the art and a specific function known in the art and easily determined by routine assays (e.g., to determine retention of the chimeric protein in the cell wall).

As discussed above, the disclosure demonstrates the applicability of the methods, nucleic acids and vectors of the disclosure to a wide and diverse range of polypeptides and peptides. It is not necessary that Applicants demonstrate each and every polypeptide or peptide known in the art in conjunction with the nucleic acid system disclosed, so long as the breadth of the claims is commensurate in scope with the disclosure. Here, the Examiner admits that the polypeptide that are downstream of the yeast Pir cell wall protein are "WIDELY variant in function" (see, e.g., the Office Action at page 9, lines 8-10). Thus, the disclosure and the Examiner's admission demonstrates that Applicants invention enables the use of widely variant proteins.

For at least the foregoing reasons, Applicants submit that the claims are enabled. Accordingly, Applicants respectfully request withdrawal of the §112, first paragraph rejection.

#### **IV. REJECTION UNDER 35 U.S.C. §102**

Claims 1-2, 4, 7-14, 16, 22, 24 and 32 stand rejected under 35 U.S.C. §102(b) as allegedly anticipated by Moukadiri et al., (J. Bacteriol. 181:4741-4745). Applicants respectfully traverse this rejection.

Moukadiri et al. do not teach or suggest each and every element of Applicants claimed invention. For example, Moukadiri do not teach or suggest an enzyme or a GAP promoter. Accordingly, Applicants respectfully request withdrawal of the §102(b) rejection.

Claims 1-2, 4-16, 22-24, 28, 32-33, and 37 stand rejected under 35 U.S.C. §102(b) as allegedly anticipated by Matilla et al. (Glycobiol 6:851-859) as allegedly evidenced by Moukadiri et al. Applicants respectfully traverse this rejection.

Applicants submit that Matilla et al., as further evidence by Moukadiri et al., do not teach each and every element of Applicants claimed invention. For example, the references do not teach or suggest a GAP promoter. Accordingly, Applicants respectfully request withdrawal of the §102(b) rejection.

**V. REJECTION UNDER 35 U.S.C. §103**

Claims 1-16, 22-24, 28, 32-33 and 37 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Matilla et al., in view of Moukadiri et al., Toh-e et al., (*Yeast* 9:481-489) and Mrsa (*Yeast* 15:813-320). Applicants respectfully traverse this rejection.

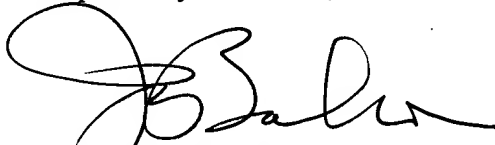
Applicants respectfully submit that a prima facie case of obviousness requires that the reference or references when combined must teach or suggest each and every element of Applicants' claimed invention. In this case, the combination of references fails to teach or suggest a GAP promoter, among other things. Accordingly, Applicants respectfully request withdrawal of the §103 rejection.

Enclosed is a \$475 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Date: \_\_\_\_\_

8/24/04

Respectfully submitted,



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